

**REMARKS****A. Status of the Claims in the application**

Claims 2 and 3, as amended, and claims 5-21 as filed are pending in the application. The amendments have been made to more fully describe and exactly claim the present invention. The rejections set forth in the Official Action have been overcome by amendment.

Applicants affirm their election with traverse of claims 1-27 for prosecution in this application, and acknowledge the Examiner's cancellation of claims 28-35 without prejudice for filing in a divisional application.

**B. The amended claims fulfill all 35 U.S.C. §112 requirements.**

All pending claims stand rejected on 35 U.S.C. §112, first paragraph grounds for failure to fulfill the enablement and written description requirements. Applicants thank the Examiner for his helpful suggestions in the Office Action. Although not agreeing with the Examiner's position, Applicants have substantially amended the pending claims in compliance with these suggestions in the interest of expediting prosecution of these claims to allowance. Applicants respectfully submit that these amendments overcome the asserted grounds of rejection.

Applicants respectfully traverse certain aspects of these rejections, however. Applicants traverse the requirement that their claims be limited to microelectrodes made from platinum wire. Their specification plainly teaches that

[i]n the preferred embodiment of the present invention the microelectrodes comprise a gold conductor and glass insulator. In alternative embodiments, the microelectrodes comprise conductor substances such as solid or porous films of silver, platinum, titanium, copper, or metal oxides, metal nitrides, metal carbides, or carbon (graphite). In alternative embodiments, the microelectrodes comprise substrate and/or insulator substances such as glass, silicon, plastic, rubber, fabric, or ceramics. The microelectrodes of the present invention have an exposed conductive surface of between  $0.01 \mu\text{m}^2$  to  $0.5 \text{ cm}^2$ . In the preferred embodiment, the exposed conductive material is between 100 to 10,000  $\mu\text{m}^2$ . One embodiment of the present invention is shown in Figure 1A, wherein the microelectrode comprises a glass capillary tube 1, containing an ultra fine platinum wire 2, to which a transition wire 3 has been soldered 6. The transition wire 3, is soldered 6 in turn to a hookup wire 4, which protrudes from an epoxy plug 5 that seals the capillary tube. In one

embodiment of the present invention, polyacrylamide gel material 7 is packed into a recess etched into the exposed surface of the platinum wire 2. (p. 12, l. 10-24).

Applicants respectfully contend that this disclosure fulfills all requirements of 35 U.S.C. §112, first paragraph. The Action does not specifically set forth any reasoned basis for the assertion that the cited portion of the specification is non-enabling.

Applicants also respectfully contend that the claims need not be limited to apparatus that contains a reference electrode. As set forth in their specification

In other embodiments of the present invention, the apparatus comprises at least one reference electrode. The reference electrode is used in assays where the further quantification of target molecules is desired. In preferred embodiments, the reference electrode comprises a silver/silver chloride electrode. In alternative embodiments, the reference electrode comprises solid or porous films of gold, platinum, titanium, or copper, metal oxides, metal nitrides, metal carbides, or carbon. (p. 13, l. 16-21).

Applicants respectfully contend that this disclosure fulfills all requirements of 35 U.S.C. §112, first paragraph. Even if a reference electrode is considered a necessary component of the claimed invention, limitation to the specific reference electrode (silver/silver chloride) is unnecessary. Applicants contend that one of ordinary skill would understand appropriate alternative choices of reference electrodes (such as a calomel electrode well known in the art). Applicants are not required to enumerate alternative embodiments known to those with skill in the art.

Applicants respectfully contend that the claims as amended fulfill the requirements of 35 U.S.C. §112, first paragraph, and request that rejections under this section of the statute be withdrawn.

The pending claims are also rejected on 35 U.S.C. §112, second paragraph grounds for failure to recite omitted elements. Although not agreeing with the Examiner's position, Applicants have amended the pending claims in compliance with these suggestions in the interest of expediting prosecution of these claims to allowance. Applicants respectfully submit that these amendments overcome the asserted grounds of rejection.

Applicants respectfully submit that the amendments submitted herein overcome all grounds of rejection based on 35 U.S.C. §112, and request that these rejections be withdrawn.

**CONCLUSIONS**

It is believed that all conditions of patentability are fully met, and allowance of the claims is respectfully solicited.

If the Examiner in charge of this application believes it to be helpful, he is invited to contact the undersigned by telephone at (312) 913-0001.

Respectfully submitted,  
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By. 

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